Inspiring Innovation in Parking and Transport

#### The Circular Economy and Roads



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## A Circular Economy





A circular economy is an economic system aimed at eliminating waste and the continual use of resources

It is based on keeping products and materials in use, and regenerating natural systems

## International Sustainability Hierarchy





1: Reduce - Reduce resource usage - Reduce energy & waste 2: Reuse / Repair - Refill, restore, repair - Reprocess at end of life 3: Recycle - Encourage upcycling - Discourage downcycling

4: Recover

## Background



- 2016 -2017, AU exported 1.2 million tonnes of waste to China
- 1 Jan 2018, enforcement of China National Sword Policy
- 1 Mar 2019, India announced complete ban of plastic waste import

#### • How did AU respond ?



## Australia's response





#### Australia's response - a ban of:



- All waste glass by July 2020
- Mixed waste plastics by July 2021
- All whole tyres including baled tyres by December 2021
- Remaining waste products, including mixed paper and cardboard, by no later than 30 June 2022.

## Recycled Materials Currently Used











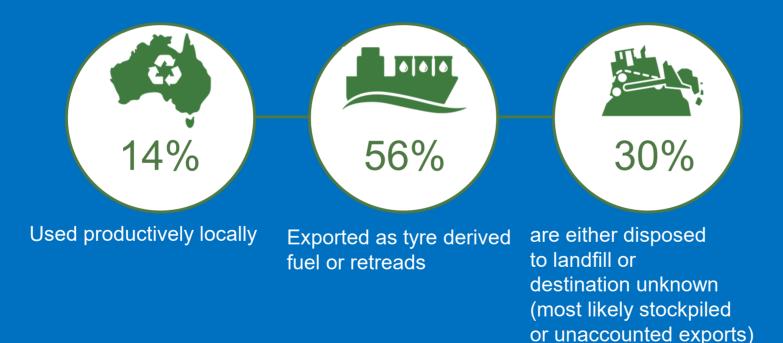


## The Tyre Challenge (2017):



#### 56 million (Approx.)

EPU<sup>\*</sup> disposed in Australia 2015-16, equivalent to 450,000 tonnes



\*Volume based on Equivalent Passenger Units (EPUs). An EPU is a standard passenger car tyre. Full EPU Ratio Tables available at greentyreproject.com.au '(Number taken from National Market Development Strategy for Used Tyres).



## Circular Economy and Roads

#### LEVEL 5 DESIGN

#### 1. Maximise durability

- design life & quality management
- minimise maintenance & disruption
- 2. Minimise energy, natural resources & waste
  - construction, maintenance & end-of-life
- 3. Extend life or reuse end-of-life products

4. Incorporate other beneficial waste products





# LEVEL5DESIGN

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